



PATENT APPEAL

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: Jay S. Walker, Andrew S. Van
Luchene, Magdalena Mik,
John Chuprevich

) Group Art Unit: 3621

) Examiner: HAYES, John

Application No.: 09/049,297

) **APPEAL BRIEF**

Filed: March 27, 1998

) Attorney Docket No. 98-007

For: SYSTEM AND METHOD FOR
TRACKING AND ESTABLISHING
A PROGRESSIVE DISCOUNT
BASED UPON A CUSTOMER'S
VISITS TO A RETAIL
ESTABLISHMENT

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Dated: October 27, 2003 By:

Veronika S. Leliever

**BOARD OF PATENT APPEALS
AND INTERFERENCES**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner in the Final Office Action mailed December 30, 2002 (Paper No. 37), rejecting claims 98-108.

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REAL PARTY IN INTEREST

The present application is assigned to Walker Digital, LLC, 1177 High Ridge Road, Suite 128, Stamford, CT 06905.

RELATED APPEALS AND INTERFERENCES

No interferences or appeals are known to Appellants, Appellants' legal representative, or assignee which will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims **98-108** are pending in the present application.

Claims **98 and 108** are being appealed.

Claims **98-108** stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 59-61 of co-pending U.S. Application No. 09/166,267.

Claims **98 and 108** stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection of Claims **98-108**.

SUMMARY OF INVENTION

According to one aspect of the present invention that may be performed by a data processing system, a customer's discount may be updated in accordance with the loyalty of the customer to a retail establishment. [See, Specification, page 13, lines 22-25]. A determination is made as to whether a current transaction date is more than a pre-defined time period (e.g., two weeks) after the date the customer's shopping card was last used. If it is, the customer may forfeit any earned discount (e.g., the earned discount is set to zero percent). [See, e.g., Specification, page 13, line 33 to page 14, line 7].

A measuring period may be provided for determining when an earned discount should be changed or remain the same. [See, e.g., Specification, page 13, lines 1-3]. Thus, a determination may be made as to whether the current transaction date is later than a second pre-defined time period (e.g., two weeks) since the last time the customer's earned discount was updated. If the last update was within the second pre-defined time period, the customer's earned discount is not changed. If not, the earned discount is incremented. [See, e.g., Specification, page 14, lines 10-18].

ISSUES

Whether Claims **98 and 108** are unpatentable under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

GROUPING OF CLAIMS

The claims in different groups do not stand and fall together.

Appellants group the pending claims as follows:

GROUP I:	Claim 98
GROUP II:	Claim 108

Appellants believe that claims in different groups are separately patentable, as explained in the following Arguments section.

ARGUMENTS

As explained below, the Examiner's rejection of the claims is improper at least because the Examiner has failed to set forth the required *prima facie* case of unpatentability of any claim. Specifically, the Examiner has not shown that any claim is directed to non-statutory subject matter.

Accordingly, the rejections are inappropriate and Appellants respectfully request that the Examiner's rejections be reversed.

In the arguments herein, claim numbers are indicated in **bold**, limitations of the claims are indicated in *italics*, and the references of record are indicated by underlining.

In separate arguments of patentability of different Groups, Appellants have, where possible, referred to prior arguments to avoid undue repetition.

1. **GROUP I**

GROUP I includes independent Claim 98.

The rejection of the claims of GROUP I is flawed because the Examiner has not made a prima facie case of unpatentability of any claim of GROUP I.

Specifically, the Examiner has not shown that any claim of GROUP I can be deemed to be directed to non-statutory subject matter.

1.1. **Independent Claim 98**

Independent Claim 98 is directed to a method for determining a discount.

The method comprises receiving a customer identifier that indicates a customer. A previous purchase associated with the customer and a time of the previous purchase are determined. A first discount associated with the customer and a time of the first discount are determined. The method also comprises determining a current transaction associated with the customer and a time of the current transaction.

A first difference is determined between the time of the current transaction and the time of the previous purchase. A second difference between the time of the current transaction and the time of the first discount is also determined.

A second discount is determined based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period. The second discount is provided to the customer.

1.2. **Advantages of Independent Claim 98**

The embodiment of Claim 98 provides several advantages not even recognized, much less disclosed or suggested, by the prior art of record, either alone or in combination.

In general, the method of Claim 98 is advantageous in that it provides for *determining a first difference between a time of a current transaction and the time of a previous purchase.*

Thus, the amount of time that has passed between a current transaction and previous purchase

may be determined. This determination may be useful in determining whether to reward a customer of a store with an increased discount. For example, if more than two weeks have passed between transactions at a store, the store may wish to take this into account in determining what the customer's earned discount should be. Thus, *determining this first difference* advantageously allows for *determining a discount based on whether the first difference is less than a predetermined minimum transaction period*.

In general, the method of Claim 98 is also advantageous in that it provides for *determining a second difference between a time of a current transaction and the time of a first discount*. Thus, the amount of time that has passed since a first discount was established may be determined. This determination may be useful in determining whether or not it is appropriate to update a customer's earned discount. [See, e.g., Specification, page 13, lines 1-3]. For example, a retail establishment desiring to reward loyal customers may also desire not to increment earned discounts too often (e.g., more than once within a given time period). For example, if a loyal customer's current transaction is only one day after the previous purchase, the store may not want to increment the customer's earned discount (e.g., in order to avoid increasing the discount too rapidly). Thus, *determining this second difference* advantageously allows for *determining a discount based on whether the second difference is greater than a predetermined discount adjustment period*.

The method of Claim 98 is advantageous in that it provides for *determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period*. For example, as will be apparent from the discussion above, *determining a customer's second discount* in this manner allows for an entity (e.g., a retail establishment) to take into account both (a) the frequency with which the customer has shopped, and (b) the frequency with which the customer's discount has been updated (e.g., in order to prevent increasing an earned discount too often). According to various embodiments, the determined second discount may be less than, more than, or equal to the first discount. [See, e.g., Specification, page 15, lines 12-26].

The method of Claim 98 is further advantageous in that it allows for *providing the second discount to the customer*. For example, *providing the second discount* enables an entity, such as a supermarket store, to reward a customer for consistent patronage of the store (or to penalize a customer who is not loyal and/or not a consistent visitor) in order to encourage desired behavior. [See, Specification, page 2, lines 15-23]. In some embodiments, *providing the second discount* may comprise updating a customer's earned discount (e.g., in a database record corresponding to the customer). [See, e.g., Specification, page 15, lines 12-26]. In some embodiments, the step of *providing the second discount* allows for applying the second discount to a transaction of the customer. [See, e.g., FIG. 5; Specification, page 9, lines 24-33]. In still other embodiments, a discount coupon may be issued to the customer. [See, e.g., Specification, page 18, lines 14-19].

1.3. No Prima Facie Showing that the Claim of GROUP I is Non-statutory

The Examiner has not provided a proper legal basis for rejecting the claim of GROUP I as non-statutory. Instead, the Examiner has proposed a novel legal test, which deems the Federal Circuit's "useful, concrete and tangible result" standard to be insufficient and incomplete.

1.3.1. Appellants' Understanding of the Standard Used by the Examiner

The claim of GROUP I is rejected by the Examiner under 35 U.S.C. 101 "because the claimed invention is directed to non-statutory subject matter." [Final Office Action mailed 12.30.02, page 3; Non-Final Office Action mailed 10.23.02, page 2].

The Examiner asserts that the "basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result."

[Final Office Action mailed 12.30.02, page 3 (Paper No. 37); Non-Final Office Action mailed 10.23.02, page 2 (Paper No. 34)].

It is Appellants' understanding that according to the "two-prong test" put forth by the Examiner, in order for a claimed invention to be deemed statutory subject matter under 35 U.S.C. 101:

- (1) the claimed invention must be "within the technological arts"; and
- (2) the claimed invention must produce a "useful, concrete, and tangible result."

1.3.2. Appellants' Understanding of Why Claim 98 Fails the Examiner's "Two-Prong Test"

The Examiner states: "Although the recited process [sic] produces a useful, concrete, and tangible result, since the claimed invention [sic], as a whole, is not within the technological arts as explained above, claims 98 and 108 are deemed to be directed to non-statutory subject matter." [Final Office Action mailed 12.30.02, page 4; Non-Final Office Action mailed 10.23.02, page 4 (inadvertently referring to "claim 1")].

The Examiner and Appellants are in agreement that Claim 98 produces a useful, concrete, and tangible result: "With respect to claims 98 and 108, applicant [sic] asserts that the claim has a useful, concrete and tangible result. Examiner agrees with this assertion...." [Final Office Action mailed 12.30.02, page 2].

It is Appellants' understanding, therefore, that the Examiner bases the rejection of Claim 98 solely on the asserted failure of the claimed invention to satisfy the first requirement of the Examiner's proposed "two-prong test." According to the Examiner: "For a process claim to pass muster [i.e., to be statutory subject matter], the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 98 and 108 only recite an abstract idea." [Final Office Action mailed 12.30.02, page 3; Non-Final Office Action mailed 10.23.02, page 3].

Appellants' further understand that the rejection of Claim 98 for failure to satisfy this first "prong" of the proposed "two-prong test" is based on the following findings by the Examiner:

- a. One or more steps of the claimed invention "can be performed in the mind of the user" [Final Office Action mailed 12.30.02, pages 2, 3; Non-Final Office Action mailed 10.23.02, page 3];
- b. One or more steps of the claimed invention "can be performed...by use of a pencil and paper" [Final Office Action mailed 12.30.02, pages 2, 3; Non-Final Office Action mailed 10.23.02, page 3]; and
- c. The claimed invention fails to recite either a "component...within the technological arts" or "any structure or functionality to suggest that a computer performs the recited steps" [Final Office Action mailed 12.30.02, pages 3-4; Non-Final Office Action mailed 10.23.02, page 3].

The reasons for the finding of non-statutory subject matter, listed above as a – c, are discussed below. As the asserted failure of Claim 98 to "apply, involve, use, or advance the technological arts" is the sole basis for the rejection, if that first "prong" of the Examiner's proposed "two-prong test" imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed.

1.3.3. The Proper Legal Standard under Section 101: "Useful, Concrete and Tangible Result"

Whether a patent claim is directed to statutory subject matter under 35 U.S.C. § 101 is a question of law. AT & T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 1355, 50 USPQ2d 1447, 1449 (Fed. Cir. 1999).

The proper legal test for the presence of statutory subject matter is only that a claimed process or apparatus produce a "useful, concrete and tangible result". See, e.g., State Street Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1375, 47 USPQ2d 1596, 1602

(Fed. Cir. 1998), cert. denied, 525 U.S. 1093, 142 L. Ed. 2d 704, 119 S. Ct. 851 (1999) (“For purpose of our analysis, as noted above, claim 1 is directed to a machine programmed with the Hub and Spoke software and admittedly produces a ‘useful, concrete, and tangible result.’ ... This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.”); AT & T Corp., 172 F.3d at 1361 (“[T]he focus is understood to be not on whether there is a mathematical algorithm at work, but on whether the algorithm-containing invention, as a whole, produces a tangible, useful, result.”). See also, State Street Bank, 149 F.3d at 1373 (“In Alappat, we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea ... because it produced ‘a useful, concrete and tangible result’--the smooth waveform); State Street Bank, 149 F.3d at 1373 (“in Arrhythmia Research Technology Inc. ... , we held that the transformation of electrocardiograph signals from a patient’s heartbeat by a machine through a series of mathematical calculations constituted a practical application of an abstract idea ... because it corresponded to a useful, concrete or tangible thing--the condition of a patient’s heart” (citations omitted)).

It is noted that the threshold for utility is not high – an invention is “useful” under Section 101 if it is capable of providing some identifiable benefit. Juicy Whip Inc. v. Orange Bang Inc., 185 F.3d 1364, 1367, 51 USPQ2d 1700, 1703 (Fed. Cir. 1999). This is to be contrasted with an invention which “is useful only in the sense that it may be an object of scientific research.” Brenner v. Manson, 383 U.S. 519, 532 (1966). The invention must have “substantial utility”, in other words a “specific benefit” which “exists in currently available form”. Id. at 534 - 35.

While other criteria, if satisfied, may be useful in indicating the presence of a “useful, concrete and tangible result” (and therefore indicate that a claim is to statutory subject matter), the absence of such criteria does not preclude a finding of statutory subject matter. The “ultimate issue” always has been whether a claim as a whole is drawn to statutory subject matter. See, AT & T Corp., 172 F.3d at 1359. Such other criteria are not requirements, but

merely some of several ways that can demonstrate that an invention produces a useful, concrete and tangible result.

For example, the reciting of physical limitations may be helpful, but are not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value....”). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the inquiry deemed the “ultimate issue” “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T Corp., 172 F.3d at 1359-60.

In another example, a physical transformation by a claimed process is one example (but not a requirement) of how a mathematical algorithm may bring about a useful application. AT & T Corp., 172 F.3d at 1357. See also, Diamond v. Diehr, 450 U.S. 175, 192, 67 L. Ed. 2d 155, 169, 101 S. Ct. 1048, 1059-60 (1981) (the “e.g.” signal denotes that physical transformation is an example, not an exclusive requirement for satisfying § 101); Arrhythmia Research Tech., 958 F.2d 1053, 1060, 22 U.S.P.Q.2D 1033, 1039 (Fed. Cir. 1992) (the transformation simply confirmed that Arrhythmia’s method claims satisfied § 101 because the method produced a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction).

Certain features are not helpful to the proper analysis, and have no bearing on the presence of statutory subject matter. For example, whether a result of a claim is expressed in numbers makes no difference. State Street Bank, 149 F.3d at 1374, (“[E]ven if the useful result is expressed in numbers, such as price, profit, percentage, cost or loss,” the invention that produces that useful result is statutory); Arrhythmia, 958 F.2d at 1060 (“That the product is numerical is not a criterion of whether the claim is directed to statutory subject matter.”).

When a mathematical algorithm included within a claimed process is “applied to produce a number which had specific meaning - a useful, concrete, tangible result - not a mathematical abstraction”, that process claim satisfies § 101. AT & T Corp., 172 F.3d at 1357, (citing Arrhythmia, 958 F.2d at 1060). Under the proper standard, claims have been found

statutory because they produced useful results such as “a final share price”, State Street Bank, 149 F.3d at 1373; a “value of a PIC indicator” which represents “information about the call recipient’s PIC”, AT & T Corp., 172 F.3d at 1357; and a condition of a patient’s heart, Arrhythmia, 958 F.2d at 1060.

In discussing this proper legal test, the Court of Appeals for the Federal Circuit has also acknowledged the judicially-created exceptions to statutory subject matter. See, e.g., AT & T Corp., 172 F.3d at 1355 (“[The Supreme Court] has specifically identified three categories of unpatentable subject matter: ‘laws of nature, natural phenomena, and abstract ideas.’” (quoting Diamond v. Diehr, 450 U.S. at 185)); State Street Bank, 149 F.3d at 1373. The Court also clarified that “certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., ‘a useful, concrete and tangible result.’” State Street Bank, 149 F.3d at 1373. Clearly, a claimed invention that satisfies this proper standard for statutory subject matter (e.g., by producing a useful, concrete and tangible result) cannot, by definition, also fall within one of the judicially-created exceptions to statutory subject matter (e.g., abstract ideas).

1.3.4. The Claim Meets the Definitive Standard for Statutory Subject Matter

As discussed above in Section 1.3.2, the Examiner and Appellants both agree that Claim 98 produces a useful, concrete and tangible result. As Appellants and the Examiner agree that Claim 98 produces a useful, concrete and tangible result, and is therefore limited to a practical application, the rejection of Claim 98 for lack of statutory subject matter cannot stand. Claim 98 cannot be directed to merely an idea in the abstract, or fall within any other judicially-created exception to patentable subject matter.

Briefly, Claim 98 includes the limitation of *determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period*. As explained in Section 1.2 and the Specification of the present application, this feature produces a useful, concrete and tangible result – a discount that may be used to influence a customer’s

behavior in ways desirable to a merchant. In this sense, the discount of Claim 98 is like the “final share price” deemed to be a useful, concrete and tangible result in State Street Bank. In addition, the limitation of *providing the second discount to a customer* may produce various useful, concrete and tangible results such as associating the second discount with the customer, or applying the second discount to a transaction of the customer.

Moreover, the scope of Claim 98 as presented encompasses a variety of specific implementations of the claimed process. Certain of these embodiments implicate the use of devices (such as computers or data processing devices) in the processes. These “device-based” species clearly fall within the broader generic definition of the claimed processes. Given that utility for a genus may be established through a recitation of utility of a species within that genus, a determination that the generically claimed process of Claim 98 lacks utility is clearly improper.

1.3.5. The Examiner’s Reasons Cannot Support a Rejection under Section 101

Based on the Examiner’s reasons a – c (listed at Section 1.3.2, page 9), Appellants understand that the rejection of Claim 98 for failure to satisfy the first “prong” of the Examiner’s “two-prong test” is based on the following proposed legal standard: If a claimed process (which produces a useful, concrete and tangible result) reads on an embodiment which is performed either in the mind of a human or by use of a pencil and paper, that process is non-statutory per se. Alternatively, or additionally, a method claim must explicitly recite a computer or other physical component, and use that component in a manner greater than “nominal use.” [Final Office Action mailed 12.30.02, pages 2, 3-4; Non-Final Office Action mailed 10.23.02, pages 3-4 (“Mere intended or nominal use of a component, albeit within the technological arts, does not confer statutory subject matter to an otherwise abstract idea if the component does not apply, involve, use, or advance the underlying process.”)].

The Examiner’s reasons, either alone or as combined in the purported standard outlined above, cannot support a rejection under Section 101.

Examiner's Reason (a) is an Incorrect Legal Standard

According to the Examiner, one or more steps of the claimed invention "can be performed in the mind of the user" [Final Office Action mailed 12.30.02, pages 2, 3; Non-Final Office Action mailed 10.23.02, page 3]. Reason (a) is thus generally that a claim must not cover an embodiment which can be performed mentally. This test is not a requirement, and more importantly is not a substitute for the proper legal inquiry under Section 101. Its inclusion as a basis for rejection is nothing less than an attempt to resurrect an invalidated legal theory.

That a claimed process might read on a mentally performed embodiment does not render a claim non-statutory. "The inclusion in a patent of a claim to a process that may be performed by a person, but that is also capable of being performed by a machine, is not fatal to patentability. Diamond v. Diehr, 450 U.S. 175, 67 L. Ed. 2d 155, 101 S. Ct. 1048 (1981). The presence of the steps of correlating and combining, which a machine is capable of doing, does not invalidate a patent." Alco Standard Corp. v. Tennessee Valley Authority, 808 F.2d 1490, 1496, 1 USPQ2d 1337, 1341 (Fed. Cir. 1986). See, also, Musco Corp. v. Qualite, Inc., Civ. Application, 106 F.3d 427, 1997 WL 16031 (Fed. Cir. 1997), (per curiam) (unpublished), cert. denied, 118 S. Ct. 60 (1997), 1997 U.S. App. LEXIS 790 ("The existence of mental steps in the claims or specification of a patent do not, in and of themselves, invalidate the patent.").

Further, the mere fact that some or all of the steps of a method "may be carried out in or with the aid of the human mind" does not render a sequence of operational steps non-statutory under 35 U.S.C. §101. In re Musgrave, 431 F.2d 882, 57 C.C.P.A. 1352 (C.C.P.A. 1970). The court in Musgrave rejected the Examiner's reasoning that the claims at issue were non-statutory under 35 U.S.C. §101 because they "include no physical steps but set forth merely a method for processing data which does not require any tangible device or apparatus to carry out the method and hence could be carried out mentally." Musgrave, 431 F.2d at 886. See also, In re Prater, 415 F.2d 1378, 56 C.C.P.A. 1376 (C.C.P.A. 1968) ("patent protection for a process disclosed as being a sequence or combination of steps, capable of performance without human

intervention...is not precluded by the mere fact that the process could alternatively be carried out by mental steps.”)

The result of a claim must be useful, concrete and tangible. The Examiner has inappropriately required that the useful result must not be able to be achieved by a particular means—in this case, “in the mind of the user.” That a claimed process might read on a particular embodiment cannot render the claim non-statutory per se. Accordingly, there is no basis for the Examiner’s standard that if a claim reads on a single embodiment which theoretically could be performed in the mind of a human, that claim does not recite statutory subject matter. The focus of the proper inquiry must be on whether the claimed process achieves a practical application—produces a useful, concrete and tangible result.

Examiner’s Reason (b) is an Incorrect Legal Standard

According to the Examiner, one or more steps of the claimed invention “can be performed...by use of a pencil and paper” [Final Office Action mailed 12.30.02, pages 2, 3; Non-Final Office Action mailed 10.23.02, page 3]. Reason (b) is thus generally that a claim must not cover any embodiment which is performed by use of a pencil and paper. Appellants are unsure of the purported standard that has been applied in this instance. Nevertheless, this test is not a requirement, and more importantly is not a substitute for the proper legal inquiry under Section 101.

The result of a claim must be useful, concrete and tangible. The Examiner has inappropriately required that the useful result must not be able to be achieved by a particular means—in this case, by use of a pencil and paper. That a claimed process might read on such a particular embodiment cannot render the claim non-statutory per se. Accordingly, there is no basis for the Examiner’s standard that if a process may be performed by use of paper and pencil, it does not recite statutory subject matter. The focus of the proper inquiry must be on whether the claimed process achieves a practical application—produces a useful, concrete and tangible result.

Examiner's Reason (c) is an Incorrect Legal Standard

Reason (c) is generally that a computer or other “component” must be explicitly recited as performing the claimed process. [Final Office Action mailed 12.30.02, page 4; Non-Final Office Action mailed 10.23.02, page 3]. Appellants are unsure of the purported standard that has been applied in this instance. Nevertheless, such a criteria is not required, and more importantly is not a substitute for the proper legal inquiry under Section 101.

The reciting of a computer or other “component” cannot be required to render a claimed process statutory. The reciting of physical limitations may be helpful, but are not necessary to render a claim statutory. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value....”). Even where a claim incorporates a mathematical algorithm, in contrast to focusing on a physical limitations inquiry, the proper inquiry “focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.” AT & T Corp., 172 F.3d at 1359-60.

It is a misunderstanding of Federal Circuit case law to contend that process claims lacking physical limitations are not patentable subject matter. “Since the claims at issue in this case are directed to a process in the first instance, a structural inquiry is unnecessary.” AT & T Corp., 172 F.3d at 1359. Further, it is well settled that one need not claim in a patent every device required to enable the invention to be used. See, e.g., Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364 (Fed. Cir. 2001).

The Examiner's type of analysis may derive from a prior test for statutory subject matter which has been discredited. AT & T Corp., 172 F.3d at 1359 (“Whatever may be left of the earlier test, if anything, this type of physical limitations analysis seems of little value ...”) This type of physical limitations analysis is of little value in the Section 101 analysis because “the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its operation does not produce a ‘useful, concrete and tangible result.’” AT & T Corp., 172 F.3d at 1359.

1.3.6. The “Two-Prong Test” Has No Basis in Law

There is no legal basis for a “two-prong test” which would impose a separate requirement beyond the requirement that a claimed invention produce a useful concrete and tangible result (i.e., be limited to a practical application). As discussed in Section 1.3.3 above, whether a claimed invention produces a useful, concrete and tangible result is the definitive standard for determining that a claim is statutory subject matter under Section 101. In other words, if a claimed invention produces a useful, concrete and tangible result, it is a practical application (even of an algorithm or abstract idea) and therefore statutory subject matter. No other determination is necessary or required.

The Examiner’s proposed “two-prong test,” however, allows for the contradictory possibility (as evidenced by the present case) that a claimed process can produce a useful, concrete and tangible result, yet still be directed to non-statutory subject matter. Accordingly, the Examiner’s “two-prong test” departs, starkly, from Federal Circuit law.

In the Response mailed November 6, 2002, Appellants stated that having a useful, concrete and tangible result is the only requirement under Section 101, and expressly requested an explanation of the basis for the Examiner’s additional requirement to be “within the technological arts.” [Response mailed November 6, 2002, pages 2-3]. The Examiner has not responded with any legal basis for the proposed “two-prong test.”

Nevertheless, under the guise of the proposed “two-prong test,” Examiner has invoked a requirement that one or more steps of a process may not be performed mentally, or by using a pencil and paper, and must recite a computer or other “component.” Even if the asserted findings by the Examiner are true, there is no legal precedent which compels the conclusion that the claimed invention cannot be statutory subject matter. To the contrary, as discussed above, relevant case law indicates that even in light of such findings, a claimed invention may still comprise statutory subject matter if it satisfies the ultimate inquiry by producing a useful, concrete and tangible result.

To accomplish the resurrection of these explicitly overruled tests, the Examiner has merely compiled them under a new “prong,” and arbitrarily labeled them as determinative of

whether a claimed invention is “within the technological arts.” There is no legal precedent to support the addition of this new “prong” to the inquiry under Section 101, especially where satisfaction of the new “prong” is based (as evidenced by the Examiner’s discussion) solely on criteria previously held insufficient per se for such a purpose.

Adoption of the Examiner’s proposed “two-prong test” would thus elevate the subject of potentially helpful inquiries under Section 101 (e.g., whether a claim recites a physical limitation) to the status of critical requirements (e.g., all process claims must recite a computer or other component). As discussed above, production of a “useful, concrete and tangible result” has been designated as the ultimate test for whether a claim falls within a judicially-determined exception to statutory subject matter. Despite this clear designation, the Examiner, relying on the arbitrary set of standards incorporated under the new “prong,” finds that the claimed process is merely to an abstract idea, and thus not “within the technological arts,” and thus not statutory. In adhering to this baseless chain of analysis, the Examiner has misunderstood and undermined the importance of the definitive and ultimate inquiry. Further, the Examiner has ignored the Examiner’s own finding that Claim 98 produces a useful, concrete and tangible result and therefore cannot be directed to only an idea in the abstract (or other judicially-excepted subject matter).

Appellants’ asserted failure to meet an unfounded separate requirement under a proposed “two-prong test” cannot form the sole basis for rejecting Claim 98 under Section 101. Specifically, since Claim 98 produces a useful, concrete and tangible result (which the Examiner admits), it cannot also be found to be directed to non-statutory subject matter.

The Examiner’s rejection cannot survive scrutiny in light of the proper Section 101 analysis. What is deemed statutory under the “ultimate” and proper inquiry cannot be deemed non-statutory merely by giving a new label to, and then recasting as determinative, inquiries insufficient for that purpose.

For all of the above reasons, the proper legal standard for statutory subject matter was not applied to Claim 98, which is directed to statutory subject matter.

SEPARATE ARGUMENT OF PATENTABILITY

2. GROUP II

GROUP II includes independent Claim 108.

The rejection of the claims of GROUP II is flawed because the Examiner has not made a prima facie case of unpatentability of any claim of GROUP II.

Specifically, the Examiner has not shown that any claim of GROUP II can be deemed to be directed to non-statutory subject matter.

2.1. Independent Claim 108

Independent Claim 108 is directed to a method for determining a discount.

The method comprises receiving a customer identifier that indicates a customer. A previous purchase associated with the customer and a time of the previous purchase are determined. A first discount associated with the customer and a time of the first discount are determined. The method also comprises determining a current transaction associated with the customer and a time of the current transaction.

A first difference is determined between the time of the current transaction and the time of the previous purchase. A second difference between the time of the current transaction and the time of the first discount is also determined.

A second discount is determined based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period. At least one item is exchanged for a payment amount that is based on the second discount.

2.2. Advantages of Independent Claim 108

The embodiment of Claim 108 provides several advantages not even recognized, much less disclosed or suggested, by the prior art of record, either alone or in combination.

In general, the method of Claim 108 is advantageous in that it provides for *determining a first difference between a time of a current transaction and the time of a previous purchase*. Thus, the amount of time that has passed between a current transaction and previous purchase may be determined. This determination may be useful in determining whether to reward a customer of a store with an increased discount. For example, if more than two weeks have passed between transactions at a store, the store may wish to take this into account in determining what the customer's earned discount should be. Thus, *determining this first difference* advantageously allows for *determining a discount based on whether the first difference is less than a predetermined minimum transaction period*.

In general, the method of Claim 108 is also advantageous in that it provides for *determining a second difference between a time of a current transaction and the time of a first discount*. Thus, the amount of time that has passed since a first discount was established may be determined. This determination may be useful in determining whether or not it is appropriate to update a customer's earned discount. For example, a retail establishment desiring to reward loyal customers may also desire not to increment earned discounts too often (e.g., more than once within a given time period). For example, if a loyal customer's current transaction is only one day after the previous purchase, the store may not want to increment the customer's earned discount (e.g., in order to avoid increasing the discount too rapidly). Thus, *determining this second difference* advantageously allows for *determining a discount based on whether the second difference is greater than a predetermined discount adjustment period*.

The method of Claim 108 is advantageous in that it provides for *determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period*. For example, as will be apparent from the discussion above, *determining a customer's second discount* in this manner allows for an entity (e.g., a retail establishment) to take into account both (a) the frequency with which the customer has shopped, and (b) the frequency with which the customer's discount has been updated (e.g., in order to prevent increasing an earned discount too often). According to various embodiments, the determined

second discount may be less than, more than, or equal to the first discount. [See, e.g., Specification, page 15, lines 12-26].

The method of Claim 108 is further advantageous in that it allows for *exchanging at least one item for a payment amount that is based on the second discount*. For example, after *determining the second discount*, an entity, such as a supermarket store, may sell one or more items to a customer at a price based on the updated earned discount (e.g., by reducing the subtotal of a purchase by an amount calculated by multiplying a percentage of an earned discount and the subtotal). [See, e.g., Specification, page 8, lines 19-23; FIG. 5; page 9, lines 24-33].

2.3. No Prima Facie Showing that the Claim of GROUP II is Non-statutory

The Examiner has not provided a proper legal basis for rejecting the claim of GROUP II as non-statutory. Instead, the Examiner has proposed a novel legal test, which deems the Federal Circuit's "useful, concrete and tangible result" standard to be insufficient and incomplete.

2.3.1. Appellants' Understanding of the Standard Used by the Examiner

The claim of GROUP II is rejected by the Examiner under 35 U.S.C. 101 "because the claimed invention is directed to non-statutory subject matter." [Final Office Action mailed 12.30.02, page 3; Non-Final Office Action mailed 10.23.02, page 2]. Claim 108 is rejected under the same proposed "two-prong test" discussed above in Section 1.3.1.

2.3.2. Appellants' Understanding of Why Claim 108 Fails the Examiner's "Two-Prong Test"

The Examiner and Appellants are in agreement that Claim 108 produces a useful, concrete, and tangible result: "With respect to claims 98 and 108, applicant [sic] asserts that the claim has a useful, concrete and tangible result. Examiner agrees with this assertion...." [Final Office Action mailed 12.30.02, page 2].

It is Appellants' understanding, therefore, that the Examiner bases the rejection of Claim 108 solely on the asserted failure of the claimed invention to satisfy the first requirement of the Examiner's proposed "two-prong test." According to the Examiner: "For a process claim to pass muster [i.e., to be statutory subject matter], the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 98 and 108 only recite an abstract idea." [Final Office Action mailed 12.30.02, page 3; Non-Final Office Action mailed 10.23.02, page 3].

Appellants' further understand that the rejection of Claim 108 for failure to satisfy this first "prong" of the "two-prong test" is based on the same findings by the Examiner outlined in Section 1.3.2 above with respect to Claim 98.

As the asserted failure of Claim 108 to "apply, involve, use, or advance the technological arts" is the sole basis for the rejection, if that first "prong" of the Examiner's proposed "two-prong test" imposes a separate requirement without basis in law, or otherwise departs from the requisite legal analysis under Section 101, the rejection is flawed.

2.3.3. The Proper Legal Standard under Section 101: "Useful, Concrete and Tangible Result"

Whether a patent claim is directed to statutory subject matter under 35 U.S.C. § 101 is a question of law. AT & T Corp., 172 F.3d 1352 at 1355. As discussed above in Section 1.3.3, the proper legal test for the presence of statutory subject matter is only that a claimed process or apparatus produce a "useful, concrete and tangible result."

2.3.4. The Claim Meets the Definitive Standard for Statutory Subject Matter

As discussed above in Section 2.3.2, the Examiner and Appellants both agree that Claim 108 produces a useful, concrete and tangible result. As Appellants and the Examiner agree that Claim 108 produces a useful, concrete and tangible result, and is therefore limited to a practical application, the rejection of Claim 108 for lack of statutory subject matter cannot stand. Claim

108 cannot be directed to merely an idea in the abstract, or fall within any other judicially-created exception to patentable subject matter.

Briefly, Claim 108 includes the limitation of *determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period*. As explained in Section 2.2 and the Specification of the present application, this feature produces a useful, concrete and tangible result – a discount that may be used to influence a customer’s behavior in ways desirable to a merchant.

In addition, the limitation of *exchanging at least one item for a payment amount that is based on the second discount* produces the useful, concrete and tangible result of facilitating a transaction for at least one item by applying the *determined second discount* to the payment amount.

Moreover, the scope of Claim 108 as presented encompasses a variety of specific implementations of the claimed process. Certain of these embodiments implicate the use of devices (such as computers or data processing devices) in the processes. These “device-based” species clearly fall within the broader generic definition of the claimed processes. Given that utility for a genus may be established through a recitation of utility of a species within that genus, a determination that the generically claimed process of Claim 108 lacks utility is clearly improper.

2.3.5. The Examiner’s Reasons Cannot Support a Rejection under Section 101

The Examiner relies on the same reasons a – c (listed in Section 1.3.2 above) in rejecting Claim 108. The Examiner’s reasons for the rejection of Claim 108 are based on an incorrect legal standard, as discussed in Section 1.3.5 and Section 1.3.6. Since Claim 108 satisfies the correct legal standard, the rejection should be reversed.

For all of the above reasons, the proper legal standard for statutory subject matter was not applied to Claim 108, which is directed to statutory subject matter.

CONCLUSION

Thus, the Examiner's rejection of the pending claims is improper at least because the Examiner has not provided a proper legal basis for rejecting any claim as non-statutory. Therefore, Appellants respectfully request that the Examiner's rejections be reversed.

If any issues remain, or if there are any further suggestions for expediting allowance of the present application, please contact Michael Downs using the information provided below.

Appellants hereby request any extension of time that may be required to make this Appeal Brief timely. Please charge any fees that may be required for this paper, or credit any overpayment, to Deposit Account No. 50-0271.

Respectfully submitted,

October 27, 2003

Date

A handwritten signature in black ink that reads "Michael Downs". The signature is written in a cursive style and is positioned above a horizontal line.

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APPENDIX A
CLEAN COPY OF CLAIMS INVOLVED IN THE APPEAL

Claims **98 and 108** are being appealed.

Claims **98 and 108** are independent.

98. A method for determining a discount, the method comprising:
- receiving a customer identifier that indicates a customer;
 - determining a previous purchase associated with the customer and a time of the previous purchase;
 - determining a first discount associated with the customer and a time of the first discount;
 - determining a current transaction associated with the customer and a time of the current transaction;
 - determining a first difference between the time of the current transaction and the time of the previous purchase;
 - determining a second difference between the time of the current transaction and the time of the first discount;
 - determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period; and
 - providing the second discount to the customer.

108. A method for determining a discount, the method comprising:
- receiving a customer identifier that indicates a customer;
 - determining a previous purchase associated with the customer and a time of the previous purchase;
 - determining a first discount associated with the customer and a time of the first discount;
 - determining a current transaction associated with the customer and a time of the current transaction;
 - determining a first difference between the time of the current transaction and the time of the previous purchase;
 - determining a second difference between the time of the current transaction and the time of the first discount;
 - determining a second discount based on whether the first difference is less than a predetermined minimum transaction period and whether the second difference is greater than a predetermined discount adjustment period; and
 - exchanging at least one item for a payment amount that is based on the second discount.